

## ***Planning Application Representation***

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# **UKWIN COMMENTS ON APPLICANT'S SUPPLEMENTARY CLIMATE CHANGE REPORT DOCUMENT 9.6**

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### **Proposed Development:**

**Boston Alternative Energy Facility (BAEF)**

### **Proposed Location:**

**Nursery Road, Boston, Lincolnshire**

### **Applicant:**

**Alternative Use Boston Projects Limited**

### **Planning Inspectorate Ref:**

**EN010095**

### **Registration Identification Ref:**

**20028052**

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## **OCTOBER 2021**

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## INTRODUCTION

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1. The Applicant made a number of statements regarding climate change in their Deadline 1 submissions dated 19<sup>th</sup> October 2021, including within Document 9.6 which is the Applicant's Climate Change Report on Further Greenhouse Gas (GHG) Emissions Analysis and Consideration of Waste Composition Scenarios.
2. Many of our critiques are set out in our Written Representation (WR) and so do not need repeating.

## INTERNAL INCONSISTENCY IN DOCUMENT 9.6

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3. Instead of resolving the internal inconsistency problem associated with the Applicant's original Climate Change report, this latest addition exacerbates, and serves to highlight, the confused nature of the Applicant's approach, raising additional concerns.
4. As such, no weight should be given to any claimed climate change benefits of the proposal, and an adverse inference should be drawn regarding the potential for this proposal to give rise to adverse climate change impacts and to hamper efforts to decarbonise the electricity supply.
5. As noted in UKWIN's WR, one of the key parameters for evaluating the climate impacts of a waste incinerator is the composition of the feedstock.
6. The specific types and proportions of waste (paper, plastic, food, etc.) impact on how much energy is generated, how much fossil and biogenic CO<sub>2</sub> is released, how much waste can be processed, and how the material would behave in landfill.
7. The connection between the feedstock's carbon content and energy content (calorific value) means that it would not be valid to consider changes in carbon content without also considering the impact on energy generation.
8. Page 2 of the Applicant's Climate Change Report on Further Greenhouse Gas (GHG) Emissions Analysis and Consideration of Waste Composition Scenarios claims that the report was "*carried out to determine the potential effect of changes to the composition of RDF waste on GHG emissions arising from the Facility*".
9. However, the approach adopted in the report does not actually assess the potential effects of changes in composition on the overall climate change impacts of the facility.

10. It would have made sense for the applicant to have looked at different feedstock composition scenarios and from them determine the associated:
  - amount of biogenic and fossil carbon,
  - calorific value, and
  - extent to which the material would decompose in landfill (i.e. DDOC value)
11. As part of this process the Applicant should have provided relevant sensitivity analysis for different key non-composition assumptions such as plant efficiency (taking account of anticipated downtime and underperformance) and the electricity generation offset.
12. Adopting such an approach would have allowed for the impact of changing composition on the the direct CO<sub>2</sub> emissions, energy generation and landfill impacts to be estimated (even if there remained significant uncertainty as to where within the range the proposal fell).
13. The Applicant instead ignored some crucial elements whilst only considered other elements in isolation, without providing any sensitivity analysis for key non-composition assumptions, and without demonstrating how their assumptions can be considered consistent with current or future RDF composition.
14. Thus the Applicant's inadequate approach fails to show the impact of changing waste composition on the net impacts of their proposal.

## **CARBON CONTENT OF THE WASTE**

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15. The report does not show that a 20-30% carbon content range would be representative of current or future RDF feedstock.
16. Furthermore, the report does not explore the implications of those feedstock scenarios on electricity generation, nor on the overall impacts that could be expected if waste of that composition were sent to landfill (with or without biostabilisation) or exported to a European incinerator.
17. The Applicant states on page 3 of the report that:

*"The parameters for the assessment were obtained from Defra guidance (Defra 2014a), where waste streams with a 20 – 30% carbon content were assumed."*
18. The Applicant does not state where this 20-30% figure appears in the cited Defra document.
19. Table 10 of Defra 2014a states that for the C (carbon) content of the waste that the range considered was derived from 'Carbon balances / WRATE model' without the upper and lower bounds being specified.

20. Many of the feedstock scenarios considered in the Defra report and in the additional studies cited by the Applicant relate to mixed municipal solid waste (MSW), not to RDF.
21. Given that RDF is nearly always composed of material that has been de-watered, and typically contains significant proportions of plastic and other high-carbon materials, RDF is likely to fall on the upper end of any carbon content range.

## **FOSSIL PERCENTAGE OF THE CARBON**

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22. The Applicant states in page 4 of the report that:

*"...a range of fossil and biogenic carbon proportions were tested, in accordance with the sensitivity analysis (Section 5.1) of the Defra 2014 study (Defra, 2014a)."*

23. The Applicant sets out a number of fossil carbon content assumptions ranging from 40% to 60%. In many cases these are based on MSW rather than RDF, but the Applicant does not provide any indication of the most likely placement within the range for current or future RDF feedstock.
24. Curiously, the Applicant does not include any consideration of the one waste composition scenario contained within the cited Defra report which specifically mentions RDF, that assumes 55% fossil carbon.<sup>1</sup>
25. The 2014 Defra report focuses primarily on MSW rather than RDF, and pre-dates the Resources and Waste Strategy (and the Government's plans regarding separate collection of food waste mentioned on page 2 of the Applicant's report).
26. As such, the Applicant's citation of the 2014 Defra report does not provide confidence regarding the Applicant's proposed range of figures.
27. Defra's 55% RDF figure does however indicate that the proposal is likely to be on the upper range of fossil carbon content.

## **EfW AND LANDFILL 'DO NOTHING' COUNTERFACTUALS**

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28. With respect to the two EfW 'Do Nothing' scenarios (Scenarios 2 and 3 in Table 3), the Applicant provides a range of potential emissions figures, but these do not correlate with the range of waste composition assumptions used elsewhere in the report.

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<sup>1</sup> This is the entry for 'Plastic and paper with contaminants of food at 10% (RDF from an MBT process)' set out in Table 13 on page 33 of the report. The assumption stated is that 45% of the carbon would be biogenic carbon, which means 55% would be fossil carbon.

29. Similarly, with respect to the Landfill element of the three 'Do Nothing' scenarios, as explained below, the Applicant does not adequately assess the impacts that would be associated with the different scenarios and does not demonstrate that those scenarios would be consistent with the six carbon content / fossil percentage scenarios listed on page 4 of Document 9.6.
30. The Document 9.6 report also fails to demonstrate that the landfill and EfW export assumptions are representative of current or future RDF composition.
31. Pages 7-8 of Document 9.6 contains three scenarios for different rates of carbon content in landfill (A, B and C), while assuming a fixed rate of 50% fossil carbon percentage despite the Applicant stating on page 4 of the document that this could range between 40% and 60%.
32. Additionally, despite the different compositions implying different rates of DDOC (i.e. decomposability) the Applicant relies only a single fixed assumption for DDOC content of 50% for all three scenarios.
33. It is noted in the Good Practice Guidance for GHG Assessment that is before the Examination that the feedstock composition impacts on how much waste would not biodegrade in landfill (therefore acting as a biogenic carbon sink).
34. Sending waste through an MBT process to produce RDF can also reduce the extent to which that waste would biodegrade in landfill, decreasing methane emissions from landfill and increasing the extent to which that material would act as a biogenic carbon sink in landfill.
35. As noted in UKWIN's WR and in the Good Practice Guidance, the use of aerobic digestion can further reduce the decomposability of landfilled materials. It could be expected that any waste sent to landfill would be increasingly likely to be biostabilised to minimise climate change impacts.
36. It appears that the Applicant has failed to take account of either the way that RDF and biostabilisation can reduce the decomposability of waste or the way that RDF or biostabilised waste can act as a biogenic carbon sink in landfill for which it should be given credit.
37. These oversights are found in the Applicant's original assessment and remain uncorrected in their Document 9.6 assessment, despite the relevance of these factors to the overall impacts of changes to waste composition anticipated to occur during the lifetime of the proposed Boston incinerator.

38. For a valid comparison it is crucial that the composition assumptions for the 'Do Nothing' scenarios are consistent with the other assumptions used to reach conclusions about the proposal's overall climate impacts.
39. Unfortunately this is still not the case for any of the 'Do Nothing' scenarios, for the reasons set out above and in UKWIN's WR.